





## Design Technology Subject Overview

Year 4	National Curriculum Objectives	Skills	Key Questions	Suggested Learning Experiences	Vocabulary (Tier 2/3)
<p><b>AUTUMN</b></p> <p><b>Power and Places: Ancient Sumerians</b></p> <p><b>Construction</b></p> <p><b>Make a decorative light box</b></p>	<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Select from and use a wide range of tools and equipment to perform practical tasks; measure, mark out, cut and shape.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex more complex structures.</p> <p>Understand and use electrical systems in their products.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated</p>	<p>Make labelled drawings from different views showing specific features</p> <p>Develop a clear idea of the process, planning how to use materials, equipment, and suggesting alternative methods of making, if the first attempts fail.</p> <p>Using a first attempt design and editing this to make changes depending on how different factors can change through the process of acquiring equipment and equipment available.</p> <p>How to use electrical systems in a safe environment.</p>	<p>Can you use what you have learnt about electricity to make a light up sign to represent something about Birmingham?</p> <p>Can your joins be done using temporary and permanent joins to help you form your product at different stages?</p>	<p>1). Remind children of previous learning. In Year 2, they made a model home through their construction topic. What skills were important when making those products? What did you have to do before you could begin making your product? Identify different light up signs that you would see around school/Birmingham. What are these signs illuminated for? What is their purpose? If they use different colours, what do the colours mean? Are they permanent or temporary? If they are temporary, why are they there on a temporary basis?</p> <p>2). Examine light box and disassemble. Name and label the different components. How does it work? Children to draw an exploded diagram.</p>  <p>3). How could they fit a series circuit with 3 bulbs into a T?</p>  <p>4). Using what they have learnt design a light box to represent something to</p>	<p>Tier 2 Select Appropriate Technique Combine Generate Represent Construct Process Product alternative</p> <p>Tier 3 Design Component Light box Disassemble Assemble Series circuit Electricity switch Frame Translucent Transparent Opaque Design specification Design model</p>

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	<p>sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>			<p>do with Greenholm. Design a new Greenholm school logo.</p> <p>5). Revise and investigate translucent, opaque and transparent materials. Produce design specification as whole class</p> <p>6). Draw a 2D diagram and label the materials and design features. Can they include a switch?</p> <p>7). Draw an exploded diagram of their own light box and label the materials and design features.</p> <p>8). Either learn how to construct a wooden frame for light box or using shoe box. What materials would be best to cover light box?</p> <p>9). Make product. Focus on how we use tools safely and how they may need to rethink design as they are making it when things don't quite work.</p> <p>10). Test and evaluate each other's products. Do they meet the design criteria/specification?</p>	
<b>SPRING</b>	Select from a wider range of tools and equipment to perform practical tasks.	Generate ideas, considering the purposes for which they are designing.	Can you design and make a chocolate bar of your own?	<p>1). Remind children of previous learning. In Year 3, they made a healthy pasta dish in their food topic. In Year 2, they made a pizza and</p>	Tier 2 Appropriate Purpose Consider

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<p><b>Chocolate:</b> <b>Ancient Mayans</b></p> <p><b>Food</b></p> <p><b>Design and make a new chocolate bar and packaging</b></p>	<p>Create own recipe with clear steps to follow to make product.</p> <p>Understand and apply the principles of a healthy and varied diet.</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>	<p>Make labelled drawings from different views showing specific features</p> <p>Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Investigate and analyse a range of existing products.</p> <p>Know health and safety rules that need to follow when cooking.</p> <p>Use cooking equipment safely.</p> <p>Measure and weigh amounts accurately</p>	<p>Can you weigh ingredients accurately?</p> <p>Can you write your ingredients out as fractions of the chocolate bar?</p> <p>Can you write clear steps for your recipe?</p> <p>How would you persuade people to buy your chocolate?</p>	<p>looked at healthy eating in their food topic. What skills were important when making those products? What did you have to do before you could begin making your product? Explore/taste different chocolate bars and evaluate existing products. What do they like/ dislike? What makes the bar appealing to the consumer? (Product/packaging) What ingredients do they contain? (Create tables linked to statistics in Maths. Ask children in same/different year groups so you have younger and older children)</p> <p>2). Look at recipe for making Tiffin. How could they use this idea of a refrigerator cake to make their own chocolate bar?</p> <p>3). Model making tiffin – health and safety using tools and equipment safely. Make sure heating ingredients is supervised by an adult.</p> <p>4). Produce design criteria for chocolate bar. Children draw an exploded diagram and label the ingredients inside the chocolate bar and outside layer.</p> <p>5). Produce recipe (in pairs?) with ingredients and method for making their own tiffin.</p> <p>6). Taste and evaluate product and recipe. How does it taste? How easy</p>	<p>Specific Accurately Existing appealing adjust</p> <p>Tier 3 Product Equipment Ingredients Method Design criteria/ Specification Weigh measure Consumer Packaging Font Colour Images logo</p>
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<p><b>SUMMER</b></p> <p><b>Kings and Queens</b></p> <p><b>Textiles – Design and make a Tudor money pouch</b></p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks: for making their product - sewing/ equipment for joining materials.</p> <p>Measure, mark out, cut and shape a range of materials, using appropriate materials and components, including textiles, according to their functional properties and aesthetic design - make a template/pattern for design.</p>	<p>Make labelled drawings from different views showing specific features.</p> <p>Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail</p> <p>Sew using a range of different stitches, weave and knit (running stitch and back stitch)</p>	<p>Can you design and make a Tudor pouch to hold coins? It must be strong enough to hold coins and decorated with a Tudor design.</p> <p>Can you measure your fabric accurately?</p> <p>What different shapes of fabric will you use? Will you need to cut any different shapes out for your design?</p> <p>What is the total weight you need your pouch to hold?</p>	<p>1). Remind children of previous learning. In Year 2 they made a seaside blanket for a seaside picnic in their textiles topic. What skills were important when making those products? What did you have to do before you could begin making your product? Examine different pouches and purses from over time. What have they got in common? Identify and label different parts.</p> <p>2). Disassemble a simple pouch/purse. Can they explain how the parts are put together? What skills will they need to be able to make the purse?</p> <p>3). Practise joining fabric together using a range of techniques; stapling,</p>	<p>Tier 2 Disassemble assemble Techniques Effective Joining appealing</p> <p>Tier 3 Pouch Purse Fabric Sewing Design specification Gluing Stapling Pattern Template</p>

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	<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>	<p>Measure, tape or pin, cut and join fabric with some accuracy.</p> <p>How to sew and use needles safely.</p> <p>How to use different types of stitching, what they are and where they are more commonly used.</p>		<p>gluing sewing. (Running stitch and backstitch) Which is the most effective and why. Which would make the pouch the strongest and why?</p> <p>4). Produce design criteria/specification for what would make a good Tudor pouch (in pairs?). Produce plan for own pouch and explain how they are going to make it. How are they going to join the pieces? How are they going to fasten it?</p> <p>5). Look at how we need to make a template or pattern first and why. Children make cardboard templates for the different parts of their pouches.</p> <p>6). Look at Tudor designs on pouches? Know how they are decorated to make them more appealing. What materials have been used to decorate them? How could they replicate this?</p> <p>7). Produce own design to decorate purse This can be a flat 2D design. Label materials they are going to use.</p> <p>8). Add design to pouch.</p> <p>9). Evaluate each other's pouches against design criteria/specification.</p>	<p>Design Decorative</p>
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**Design Technology Subject Overview**

	Understand how key events and individuals in design and technology have helped shape the world.				
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